

4.14 UTILITIES/SERVICE SYSTEMS

This section of the EIR analyzes the potential environmental effects on utilities/service systems from implementation of the proposed project. This section identifies existing and planned service availability and anticipated demands. For purposes of this EIR, the utilities/service systems analysis is divided into four subsections: (1) water supply, storage, and distribution; (2) wastewater collection, transmission, and treatment; (3) solid waste collection and disposal; and (4) energy (electricity and natural gas) use. Cumulative impacts associated with water supply, wastewater, solid waste, and energy are addressed at the end of each respective subsection.

Water Supply

This section describes the current status of water supply services in the City of Huntington Beach, and the ability of the City's water supply services to meet the current needs of the City. The City of Huntington Beach adopted its 2010 Urban Water Management Plan (UWMP) on June 20, 2011. Data for this section were taken from 2010 Urban Water Management Plan, the Water Supply Assessment for the Beach-Edinger Corridors Specific Plan (WSA), as well as contacts with utility providers and City staff. The WSA prepared for the Beach and Edinger Corridors Specific Plan (BECSP) pursuant to Water Code Sections 10910 et seq., which includes the proposed project site, identifies methodologies to calculate water demand for the proposed project resulting from the net increases in land uses. Full reference-list entries for all cited materials are provided in Section 4.14.5 (References).

4.14.1 Environmental Setting

The City of Huntington Beach Public Works Department (Public Works) is the principal water retailer within the City boundaries and the Sunset Beach area of unincorporated Orange County. The service area includes the BECSP area as well as the proposed project site. Public Works is responsible for operating and maintaining wells, reservoirs, imported water connections, distribution pipelines, fire hydrants, water meters, and related infrastructure. Public Works conducts comprehensive water quality testing and monitoring programs and develops long-range operational and engineering plans designed to prepare for future needs and contingencies.

■ Water Sources and Supplies

The City's drinking water is a blend of surface water imported by the Metropolitan Water District of Southern California (Metropolitan) and delivered to its member agencies throughout southern California. Municipal Water District of Orange County⁹⁶ (MWDOC) is a Metropolitan member agency and the City of Huntington Beach is one of twenty-eight MWDOC retailers. The City pumps groundwater from the Santa Ana River basin, locally known as the Orange County Basin. Approximately one-third of the water used in the City is imported water and groundwater makes up the balance, roughly two-thirds.

⁹⁶ MWDOC is a wholesale water supplier and resource planning agency that serves all of Orange County (except Anaheim, Fullerton, and Santa Ana) through 28 retail water agencies. MWDOC purchases imported water from the Metropolitan and distributes it to our client agencies, which provide retail water services to the public.

Metropolitan's imported water sources are delivered from the Colorado River Aqueduct (CRA) and the State Water Project (SWP), which draws water from the Sacramento-San Joaquin Bay Delta (Delta) via pumps in the southern Delta and conveys it through the California Aqueduct to southern California. The City maintains three imported water connections with Metropolitan: two connections are operated under the West Orange County Water Board⁹⁷ (WOCWB) joint powers agreement and the third is controlled solely by the City of Huntington Beach. One connection (OC 9) is located in the Northeast corner of the City and has the capacity to deliver 6,750 gpm into the water system. A second connection (OC 35) is located in the Northwest corner and has a capacity of 11,250 gpm. The OC 44, the City's controlled connection enters the southeast portion of the City and has a capacity of 7,000 gpm.⁹⁸

Groundwater comes from a natural underground reservoir managed by the Orange County Water District (OCWD) that stretches from the Prado Dam and fans across the northwestern portion of Orange County, excluding the communities of Brea and La Habra, and as far south as the El Toro "Y."

■ **Metropolitan Water District of Southern California (Metropolitan)**

Metropolitan was formed in the late 1920's. At that time, Orange County was mostly an agriculturally based economy with the cities of Santa Ana, Anaheim, and Fullerton as the primary centers of urban development. Although other cities and residential communities existed at that time, it was these three cities that joined ten others located in Southern California, to form Metropolitan in 1928. Collectively, these charter members recognized the limited water supplies available within the region, and realized that continued prosperity and economic development of Southern California depended upon the acquisition and careful management of an adequate supplemental water supply. This foresight made the continued development of Southern California and Orange County possible.

Metropolitan imports water from northern California via the State Water Project (SWP) and from the Colorado River Aqueduct (CRA) to supply water to most of southern California. As a wholesaler, Metropolitan has no retail customers, and distributes treated and untreated water directly to its 26 member agencies. One such member agency is MWDOC.

■ **MWDOC Information**

MWDOC was formed for the purpose of contracting with Metropolitan to acquire supplemental imported water supplies from northern California and the Colorado River for use within Orange County. MWDOC is a regional water wholesaler and resource planning agency, managing all of Orange County's imported water supply with the exception of water imported to the cities of Anaheim, Fullerton, and Santa Ana. MWDOC serves more than 2.3 million residents in a 600-square-mile service area and is Metropolitan's third largest member agency.

⁹⁷ The WOCWB is a joint powers agreement between the cities of Huntington Beach, Garden Grove, Westminster, and Seal Beach for the ownership and operation of two large connections (OC-9 and OC-35) to the imported water system.

⁹⁸ City of Huntington Beach, Water Source, http://www.huntingtonbeachca.gov/Government/Departments/Public_Works/utilities/supply/ (accessed August 23, 2010).

Local supplies developed by individual member agencies, primarily groundwater, presently account for about 50 percent of MWDOC's direct water use by its members. The remaining 50 percent of direct water use demand is met by imported water from Metropolitan.

■ OCWD Water Supply Planning

OCWD was formed in 1933 by a special act of the California Legislature to protect the groundwater basin. The District is neither a wholesale nor a retail water provider; rather, the District manages the groundwater basin through regional recharge programs. Recharge is accomplished with local and imported water supplies to offset pumping from the Basin. Because OCWD is the manager of the Basin and not an urban water supplier, it is not required to develop an UWMP; however, in 2004, OCWD adopted a Groundwater Management Plan (GMP) in its capacity to ensure sufficient water supplies for present and future beneficial uses within Orange County. An update to the OCWD GMP was released in May 2009. The GMP has objectives to help secure a long-term viable supply of groundwater; this management strategy, described in more detail below, is effectively based upon groundwater recharge programs including the forebay recharge facilities, seawater intrusions barriers, and in-lieu programs and water storage agreements with Metropolitan.

There are twenty-three major producers extracting water from the Orange County groundwater basin, which is managed by OCWD in collaboration with the other water and wastewater agencies.

OCWD's allowable Basin Pumping Percentage (BPP) establishes the annual pumping percentage per OCWD member and may vary annually. The BPP was originally established in 1962, it has varied from 62 to 89 percent. The average BPP over its 42-year history is 71.1 percent.⁹⁹ The BPP is set uniformly and is a portion of each member's water supply that comes from groundwater pumped from the basin. OCWD members pay a Replenishment Assessment (RA) fee for water pumped from the basin. Groundwater production at or below the BPP is assessed the RA. Any production above the BPP is charged the RA plus the Basin Equity Assessment (BEA). The BEA is calculated so that the cost of groundwater production above the BPP is typically higher than purchasing imported potable supplies. This approach serves to discourage, but not eliminate, production above the BPP. The BEA can be increased as needed to discourage production above the BPP. Long-term projections of the BPP range from 62 to 65 percent plus or minus 5 percent based on a myriad of factors.¹⁰⁰ Currently, the BPP is set at 62 percent, and groundwater pumped between 62 percent to a maximum restriction of 64 percent will be charged the sum of the RA and BEA, which is essentially the same rate as the import water rate purchased through MWDOC.

Within the City, groundwater for potable use is produced from ten operating wells that vary in depth from 250 feet to 1020 feet, with production ranging from 450 gallons per minute (gpm) to 4,000 gpm. Total capacity of the ten wells is 30,000 gpm.¹⁰¹

⁹⁹ City of Huntington Beach, *2010 Draft Urban Water Management Plan* (2010), p. 2-12

¹⁰⁰ City of Huntington Beach, *2010 Draft Urban Water Management Plan* (2010), p. 2-12

¹⁰¹ City of Huntington Beach, Water Source, http://www.huntingtonbeachca.gov/Government/Departments/Public_Works/utilities/supply/ (accessed August 23, 2010).

■ West Orange County Water Board (WOCWB)

As discussed earlier, the WOCWB is a Joint Powers Agency between four participating agencies. The members include the City of Huntington Beach, the City of Garden Grove, the City of Westminster, and the City of Seal Beach. The board consists of five members, with the City of Huntington Beach having two seats. The board meets quarterly and manages surface water deliveries from Metropolitan (through MWDOC) to the agencies. The board oversees the maintenance of two feeder pipelines that connect to the treated surface water supply. The pipelines have a capacity of 21 cubic feet per second (cfs) and 45 cfs. Each of the member agencies has paid for the capacity of the feeder pipelines and directly pays MWDOC for the use of water.

■ Supplies within the City of Huntington Beach

Total potable supplies within the City are composed of local groundwater and imported water. In the 2010 water year, the City pumped approximately 62 percent of its water supply from groundwater wells accessing the Santa Ana River groundwater basin and purchased 38 percent from Metropolitan through MWDOC. These percentages are established through OCWD's allowable BPP. The BPP is typically set by OCWD on an annual basis. However, OCWD does have the option of revising the BPP as needed. Actual percentages vary somewhat on an annual basis depending on the extent in-lieu delivery programs are implemented and groundwater levels (e.g., in 2003/04, the City's water supply was 66 percent imported water and 34 percent groundwater. Current and projected water supplies in Normal Years from imported water and groundwater are shown in Table 4.14-1 (Current and Planned Water Supplies in AFY [Normal Water Year]).

Table 4.14-1 Current and Planned Water Supplies in AFY (Normal Water Year)							
Water Supply Sources	2010^a	2010^b	2015	2020	2025	2030	2035
MWDOC—Import	11,197	21,370	25,180	29,230	33,270	31,810	30,420
Groundwater Production	18,271	20,070	20,220	20,480	20,970	21,280	21,490
Total Water Supply	29,468	41,440	45,400	49,710	54,240	53,090	51,910

a. Actual 2010 supply used, refer to Appendix E of the City's 2010 UWMP.

b. 2010 estimated available supply, under Normal Water Year, including surplus, see Table 5.2-1 of the City's 2010 UWMP. Because 2010 was a Metropolitan Water Supply Allocation Year and not a Normal Water Year, there was no surplus.

In years of low precipitation MWDOC's WSAP formula is used to determine water supplies to the City under the current hydrologic conditions. Base Period supplies were formulated by calculating supply deliveries for three previous years and then factoring in conservation credits and other specific adjustments.

Table 4.14-2 (MWDOC's WSAP Base Year Supplies [afy]) shows the supplies available to the City under MWDOC's WSAP Base Period model (no reductions), hereinafter referred to as "Base Year." Under this supply scenario commencing in July 2009 through 2010, the City would expect to receive 33,323 afy.

Table 4.14-2 MWDOC's WSAP Base Year Supplies (afy)

Years	2009	2010	2015	2020	2025	2030
Imported Water	12,663	12,663	12,663	12,663	12,663	12,663
Groundwater	20,660	20,660	20,660	20,660	20,660	20,660
Total^a	33,323	33,323	33,323	33,323	33,323	33,323

a. MWDOC's WSAP Base Year Water Supply Allocation. Assumes 38% Imported Water from MWDOC and 62% BPP of Groundwater from OCWD.

However, if statewide water supplies are reduced, then both Metropolitan and MWDOC would respond as they did in 2008, 2009 and 2010 to initiate their WSAP. Under WSAP Stage 2 as observed in 2009, the City expected to receive less than the Base Year water supply allocation, which is estimated to be 31,963 afy. One short-term solution to compensate for reduction in import supply can be achieved by pumping within the BEA restriction, currently set at 2 percent above BPP, at a rate essentially the same as the purchasing rate through MWDOC. As shown in Table 4.14-3 (MWDOC's WSAP Stage 2 Supplies with 2009 BEA of 2% or 64% Groundwater [afy]), under MWDOC's WSAP Stage 2, additional groundwater pumping within BEA restriction could increase annual supplies by 1,776 acre-feet.¹⁰² Under MWDOC's WSAP Stage 3, that could increase by 1,688 acre-feet.

Table 4.14-3 MWDOC's WSAP Stage 2 Supplies with 2009 BEA of 2% or 64% Groundwater (afy)

Years	2009	2010	2015	2020	2025	2030
Imported Water	12,146	12,146	12,146	12,146	12,146	12,146
Groundwater	21,593	21,593	21,593	21,593	21,593	21,593
Total^a	33,739	33,739	33,739	33,739	33,739	33,739

a. MWDOC WSAP Base Year Water Supply Allocation. Assumes 38% Imported Water from MWDOC and 62% BPP of Groundwater from OCWD, plus 2009 BEA allowance of 2%.

Projected supplies are shown in Table 4.14-4 (City of Huntington Beach Supply Allocations with WSAP Stage 2 and Stage 3 Allocations—Normal, Single-Dry, and Multiple-Dry Years [2010–2030]). If, for example, next year is dry year, MWDOC could initiate Stage 2 of the MWDOC WSAP and reduce deliveries accordingly.

■ Water Demand

Regional Demand

Wholesale and retail agencies, special districts, municipalities, and consumers within their respective service areas, evaluate water demand in southern California. In this context, Metropolitan analyzes wholesale demand at a regional level, MWDOC assesses demand within its twenty-eight member agencies within Orange County including the City, and the City evaluates demand within its service area

¹⁰² Total supplies would increase from 31,963 afy (WSAP Stage 2) to 33,739 afy (Table 4.7-4), which is an increase of 1,776 afy.

Table 4.14-4 City of Huntington Beach Supply Allocations with WSAP Stage 2 and Stage 3 Allocations—Normal, Single-Dry, and Multiple-Dry Years (2010–2030)

Supply Allocation	Base Year Water Supply Allocation ^a		WSAP Stage 2 Allocation Single Dry Year ^b		Multiple Dry Year Event ²					
					WSAP Stage 2 Allocation Dry Year 1 ^c		WSAP Stage 3 Allocation Dry Year 2 ^d		WSAP Stage 3 Allocation Dry Year 3	
	afy	%	afy	%	afy	%	afy	%	afy	%
Huntington Beach Allocation	33,323	100	31,963	90	31,963	90	30,376	85	30,376	85

SOURCE: Developed by PBS&J for Water Supply and Demand Planning Purposes.

a. MWDOC Draft WSAP 2009 from City of Huntington Beach staff August 5, 2009. Assumes 38% imported water from MWDOC and 62% BPP of groundwater from OCWD.

b. PBS&J developed additional dry year planning projections based on Stage 2 and Stage 3 Allocations.

c. Stage 2 Allocation in effect beginning in Dry Year 1 – Same as Single Dry Year.

d. Stage 3 Allocation in effect after Dry Year1 and due to the WSAP model WSAP Stage remains in effect over the next year as well.

boundaries. For a complete description of water demand throughout Metropolitan’s service areas and the demand within MWDOC’s service area, refer to the BECSP EIR and BECSP WSA.

City of Huntington Beach Demand

The City estimates a range of different future water demands, such as average-day demands and other adjusted demands, in order to adequately plan for anticipated growth for water supply and sizing of pipes, respectively. In the City of Huntington Beach, water demand is not dissimilar from other municipal water providers, insofar as demand occurs as a result of consumptive uses by consumers.

As shown in Table 4.14-5 (Historical Demands [2001–2010]) annual City demand over the last decade has decreased. Demand in 2008 was 31,662 acre-feet as compared to 34,790 acre-feet in 2001 and then in 2010 demand fell to 28,438 acre-feet. Demand decreases could be contributed to significant conservation efforts, and loss of tourism and accounts due to the continuing decline in economic conditions. As demand decreases the City’s overall supply and demand situation is expected to improve; however, at some point, water demand will hit a point at which water conservation savings will harden and further savings will not be observed.

Since 1990, new connections have been added at a rate of approximately one percent per year, but that rate declined in recent years due to economic conditions. Due to new plumbing efficiency standards, landscape guidelines, and other water use efficiency programs, water demand is projected to increase at a declining rate of less than one percent per year in future years. Table 4.14-6 (Current [2010] and Projected Water Use by Billing Classification [afy]) presents current as of 2010 and projected water use between 2010 and 2035 by billing classifications. As shown in Table 4.14-6, the City uses the following classifications: Single Family Residential, Multi-Family Residential, Commercial, Industrial, Institutional/Governmental, and Landscape Irrigation.¹⁰³

¹⁰³ City of Huntington Beach, *2010 Draft Urban Water Management Plan* (2010), p. 6-1.

Table 4.14-5 Historical Demands (2001–2010)	
Year	Water Demand (afy)
2001	34,790
2002	34,736
2003	33,333
2004	34,088
2005	32,619
2006	31,634
2007	33,067
2008	31,662
2009	31,252
2010	28,438
Gross Water Use = Water from own sources + Imported – Recycled – Agricultural	

Beach and Edinger Corridors Specific Plan (BECSP) Demands

The BECSP WSA evaluated whether the projected future water supplies in the City would be sufficient to meet projected future demand of the City's retail service area, including demands generated by the BECSP, which included the proposed project. The WSA identified the water sources to be utilized by the City in the future, and discussed reliability issues with regard to each source.

As shown in Table 4.14-7 (Beach and Edinger Corridors Specific Plan Water Demands), the water demand of the entire BECSP area is conservatively estimated to be 1,371 afy, which assumes full build-out of the entire Specific Plan area with all 6,400 du implemented.¹⁰⁴ It should be noted that future developments under the BECSP could be LEED certified and incorporate design elements and post-construction operational activities, which are intended to reduce landscape and operational water use. The use of innovative wastewater technologies may result in further operational reductions. The projected water demands shown in Table 4.14-7 do not reflect any of these potential water saving efficiencies. Installation of water efficient fixtures in new developments along with drought-tolerant landscaping could reduce demands as much as 40 percent.¹⁰⁵

Compared to existing water demand, full buildout of the BECSP could result in a net increase in water demand of approximately 1,180 afy, as shown in Table 4.14-8 (Net Change in Demands from Existing to BECSP Build-Out Demands).

¹⁰⁴ The BECSP ultimately was approved with a maximum residential build out of 4,500 dwelling units.

¹⁰⁵ City of Menlo Park, *Draft Water Supply Assessment* (June 2009), KEMA Memorandum.

Table 4.14-6 Current (2010) and Projected Water Use by Billing Classification (afy)

<i>City Billing Class</i>	<i>2010</i>	<i>2015</i>	<i>2020</i>	<i>2025</i>	<i>2030</i>	<i>2035</i>
Single Family Residential	13,754	15,526	15,708	16,029	16,252	16,384
Multi-Family Residential	6,149	7,035	7,119	7,346	7,420	7,525
Commercial	3,582	4,073	4,202	4,396	4,572	4,648
Industrial	511	574	574	574	574	574
Institutional/Governmental	155	175	176	177	178	179
Landscape Irrigation	2,651	2,981	2,982	2,983	2,984	2,985
Other - Outside of Billing System (AES Power Plant, Central Park, Meadowlark Park)	466	524	524	524	524	524
<i>Subtotal</i>	<i>27,268</i>	<i>30,888</i>	<i>31,285</i>	<i>32,031</i>	<i>32,505</i>	<i>32,820</i>
Unaccounted for System Losses ^a	1,611	1,729	1,751	1,793	1,819	1,837
<i>Total Water Use</i>	<i>28,879</i>	<i>32,616</i>	<i>33,036</i>	<i>33,823</i>	<i>34,324</i>	<i>34,657</i>

SOURCE: Year 2010 data from City of Huntington Beach for City Fiscal Year (i.e., 2010 data is for October 1, 2009 through September 30, 2010); all future water use by billing class from Table 5.2-3

a. 2005 and 2010 unaccounted for losses are based on actual data; all other years based on an estimated average loss of 5.3% (i.e., the average percentage loss over the past five years).

Table 4.14-7 Beach and Edinger Corridors Specific Plan Water Demands

<i>Land Use/Connection Designation</i>	<i>Area (sf)</i>	<i>Unit</i>	<i>Demand Factor</i>	<i>Total Demand (afy)</i>
Commercial Uses				
Office	112,000		0.15 gpd/sf	19
Retail ^a	627,640		0.15 gpd/sf	106
Restaurant ^b	110,760		1.5 gpd/sf	186
Landscaping/ROW ^c	473,497		0.01 gpd/sf	5
<i>Subtotal</i>	<i>1,323,897</i>			<i>316</i>
Residential ^d		6,400 du ^f	140 gpd/du	1,004
Hotel ^e		350 rooms	130 gpd/room	51
<i>Subtotal</i>				<i>1,055</i>
<i>Total</i>				<i>1,371</i>

SOURCE: PBS&J, *Water Supply Assessment for the Proposed Beach and Edinger Specific Plan Project*, Prepared for City of Huntington Beach (August 2009), Appendix G.

du = dwelling unit

a. City of Huntington Beach, Bella Terra II Water Supply Assessment May 2008 (0.15 gpd/sf for restaurant).

b. City of Huntington Beach, Bella Terra II Water Supply Assessment May 2008 (1.5 gpd/sf for restaurant).

c. Estimated sf of landscape areas. Need actual or best guess from SP.

d. Two persons per du as used in the Bella Terra II Water Supply Assessment, May 2008.

e. Seattle Public Utilities Resource Conservation Section, Hotel Water Conservation, A Seattle Demonstration, July 2002, prepared by O'Neill & Siegelbaum and The RICE Group.

f. The BECSP ultimately was approved with a maximum residential build out of 4,500 dwelling units.

Table 4.14-8 Net Change in Demands from Existing to BECSP Build-Out Demands

Land Use/Connection Designation	Total Demand	
	afy	Mgd
Existing Water Demands ^a	190	0.17
Specific Plan Water Demands ^b	1,371	1.22
Net Change in Water Demand^c	1,180	1.1

SOURCE: PBS&J, *Water Supply Assessment for the Proposed Beach and Edinger Specific Plan Project*, Prepared for City of Huntington Beach (August 2009), Appendix G.

a. WSA Table 5-4. Existing Water Demand.

b. WSA Table 5-5: Beach-Edinger Specific Plan Water Demands.

c. Assumes existing water demands in the project area were accounted for in the 2005 UWMP. The net change in demands is added to the demand were not accounted for in the 2005 UWMP and will be added to demand projections beginning in 2010 and extending through 2030.

Supply and Demand Comparisons

Table 4.14-9 (Projected Water Supply and Demand [Normal Year] [afy]) compares anticipated supply and calculated demand over the next 20 years based on currently available information from OCWD, MWDOC, and Metropolitan. Within the City, an increase in demand of 2,040 afy is anticipated between 2015 and 2035, which includes the proposed project's contribution. In that same time period, supplies are anticipated to grow with population increases. The City can expect demand to increase each year between 2015 and 2035. As shown in Table 4.14-9, supplies exceed demand because the City only delivers what is necessary to meet daily demands. Although a surplus supply is presented in Table 4.14-9, the City only has the storage capacity in its local reservoirs for up to 55 million gallons.

Table 4.14-9 Projected Water Supply and Demand (Normal Year) (afy)

Water Supply Sources	Years				
	2015	2020	2025	2030	2035
Imported	25,180	29,230	33,270	31,810	30,420
Local (Groundwater) ^a	20,220	20,480	20,970	21,280	21,490
Total Supply	45,400	49,710	54,240	53,090	51,910
Total Demand ^b	32,620	33,040	33,820	34,320	34,660
Supply/Demand Difference (Surplus)	12,780	16,670	20,420	18,770	17,250

SOURCE: City of Huntington Beach, *2010 Urban Water Management Plan* (2010), Table 5.2-1.

Water Infrastructure, Treatment and Distribution

The City of Huntington Beach has four reservoirs with a total combined capacity of 55 million gallons. Various booster pumps draw water from the reservoirs and pressurize it into the water system during high demand periods. Overmeyer Reservoir has a capacity of 20 million gallons. Peck Reservoir has a capacity of 17 million gallons. Edwards Hill Reservoir is the newest facility and has a capacity of 9 million gallons. Springdale Reservoir has a capacity of approximately 9 million gallons.

The City of Huntington Beach also has ten wells, three imported water connections, and a variety of transmission and conveyance facilities. Wells vary in depth from 250 to 1,020 feet and range in production from 450 to 4,000 gpm. The total system capacity of the City's groundwater wells is 30,000 gpm. The booster pumps have a total capacity of 44,365 gpm, which is adequate to keep the system pressurized under peak flow conditions.¹⁰⁶

4.14.2 Regulatory Framework

Refer to Section 4.14.2 (Regulatory Framework) in the BECSP Program EIR, for applicable federal, state, and local regulations that would apply to the proposed project. Since the certification of the Program EIR, Senate Bill SBx7-7 described below has been implemented.

The BECSP Development Code, which includes development standards, development regulations, and guidelines, governs all development actions with the BECSP area, including the proposed project site. The proposed project would be subject to development standards specific to the proposed project site's BECSP designations of Town Center Neighborhood, included as BECSP Section 2.1.4 (Town Center Neighborhood).

Senate Bill SBx7-7 2009 (Water Conservation Act of 2009)

Senate Bill SBx7-7 requires states to achieve a 20 percent reduction in urban per capita water use by December 31, 2020, requires the preparation of agricultural water management plans and efficient water management practices for agricultural water suppliers, and promotes expanded development of sustainable water supplies at the regional level. Specifically, SB x7 1 requires the following:

- 1) Establishes statewide urban water conservation target of 10 percent by 2015, and 20 percent by 2020.
- 2) Establishes processes for urban water suppliers to meet the conservation targets:
 - a) Requires urban retail water suppliers, individually or on a regional basis, to develop an urban water use target by July 1, 2011;
 - b) Provides four (4) methods for urban water suppliers to choose from to set and achieve their water use target:
 1. 20 percent reduction in baseline daily per capita use, or
 2. Combination of efficiency standards for residential indoor use [55 gallons per capita daily (gpcd)]; residential outdoor use (Model Water Efficient Landscape Ordinance); and commercial, industrial, and institutional (CII) use (10 percent reduction); or,
 3. 5 percent reduction in the Department of Water Resources (DWR) regional targets; or
 4. A method to be developed by DWR: Provisional method four (4) developed by DWR February 2011.
 - c) Requires minimum 5 percent reduction in base water use by 2020 for all urban water suppliers.
 - d) Allows recycled water to count toward meeting urban supplier's water use target if recycled water offsets potable water demands.

¹⁰⁶ City of Huntington Beach, Water Source, http://www.huntingtonbeachca.gov/Government/Departments/Public_Works/utilities/supply/ (accessed August 23, 2010).

- e) Allows urban suppliers to consider certain differences in their local conditions when determining compliance.
 - f) Requires urban water suppliers to hold public hearings to allow for community input on the supplier's implementation plan for meeting their water use target, and requires the implementation to avoid placing a disproportionate burden on any customer sector.
 - g) Conditions eligibility for water management grants and loans on an urban water supplier's compliance with meeting the requirements established by the bill.
- 3) Prohibits urban suppliers from requiring changes that reduce process water—defined in the bill as water used in production of a product—and allows urban water supplier to exclude process water from the development of the urban water target if substantial amount of its water deliveries are for industrial use.
 - 4) Requires DWR review and reporting on urban water management plans and report to the Legislature by 2016 on progress in meeting the 20 percent statewide target, including recommendations on changes to the standards or targets in order to achieve the 20 percent target.
 - 5) Creates a CII Task Force to develop best management practices (BMPs), assess the potential for statewide water savings if the BMPs are implemented, and report to the Legislature.
 - 6) Re-establishes agricultural water management planning program.
 - 7) Requires DWR to promote implementation of regional water resource management practices through increased incentives/removal of barriers and specifies potential changes.
 - 8) Requires DWR, in consultation with SWRCB, to develop or update statewide targets as to recycled water, brackish groundwater desalination, and urban stormwater runoff.

■ General Plan and BECSP Consistency Analysis

Implementation of the proposed project could include the construction of necessary water conveyance pipeline upgrades, both on and off site, to serve proposed development, as required by General Plan Policy U 1.1.1. The water lines associated with the proposed project are required to be sized to meet the average day demand with necessary peaking factors. Implementation of BECSP CR4.14-1 would ensure that adequate water infrastructure is developed to serve the proposed project. However, it is anticipated that the increase in water demand would not result in necessary upgrades to the water treatment plants. Further, mitigation measure BECSP MM4.14-1 would reinforce and expand upon the LEED-equivalent conditions for water efficiency and could further reduce the project's demand on water resources. As such, the project would be consistent with the goals, objectives, and policies contained in the BECSP and the City's General Plan.

4.14.3 Project Impacts and Mitigation

■ Analytic Method

The analysis in this section focuses on whether the projected increase in water use at the project site falls within the City's projected water demands. It also includes an analysis of whether any infrastructure improvements would be necessary and whether there will be an adequate and reliable source of water for the proposed project. The primary resources used for this analysis include the following technical documents: City of Huntington Beach 2010 Urban Water Management Plan (Huntington Beach, June

2011) and demand information from the Water Supply Assessment for the Beach and Edinger Specific Plan Project (PBS&J 2009); and other supporting documents.

The Water Code addresses the need for a new WSA if the original WSA showed a water supply deficiency. The statewide water supply situation affects all of southern California, including the City. As modeled in the BECSP WSA, a potential citywide supply shortfall could occur in all years over the 20-year planning horizon; however, this is based on the most conservative supply and demand model. Other models show supply and demand in balance due to additional groundwater pumping, and effective demand reductions (conservation) and/or supplemental supply purchases. Furthermore, a similar situation would occur throughout the region, and the intent of the legislature was not to burden water suppliers (the City) with the onerous task of repeating the SB 610 analysis for new projects proposed within a previously analyzed area.

In *OWL vs. City of Rohnert Park*, the court found that WSAs are not the vehicle for long, protracted analysis while the land use authority is trying approve projects in a timely manner, the best available data are sufficient. In this case, the BECSP WSA and the water supply section for the BECSP Program EIR evaluated the implementation of the project-specific components of the BECSP and the water demand associated with each of these components on a project level and cumulatively (citywide). The BECSP WSA concluded that due to the statewide water supply situation and challenges facing Metropolitan, the City under certain supply and demand scenarios would not have adequate supplies, but under other scenarios modeled in the WSA demand could be less than or balance with supply. [Note: between July 2009 and June 2010 water demand within the City has continued to decline; demand was 29,463 acre-feet over that period, down from 31,691 acre-feet from the previous 12-month period.]

Therefore, because the BECSP WSA fully evaluated all supply and demand scenarios that could occur in the City of Huntington Beach through 2030, this analysis finds that the need to pursue a project-specific WSA for the proposed project would be overly conservative, contrary to Water Code Section 10910(h), and exceeds the intent of the legislature. For these reasons, a project-specific WSA is not required.

As shown in Table 4.14-8, the development within the BECSP consists of residential, retail, office, and hospitality uses. Specifically, 4,500 new dwelling units and commercial uses are anticipated to be implemented through the various developments analyzed in the BECSP EIR, which include the 105 dwelling units, 7,000 sf of retail-shop and 30,000 sf of retail-market uses included in the proposed project.¹⁰⁷ Water use rates, which are used to determine water demands, vary depending on the form of development. Water demand rates for the proposed project were based on the generation demand rate used in the BECSP WSA. The amount of proposed development and its associated water demand is used to develop average-day water use rates, as shown in Table 4.14-10 (Proposed Project Land Use and Water Demand). As shown Table 4.14-10, the proposed project would generate a water demand of 29.74 afy; however, the proposed project's water demand was previously analyzed as part of the BECSP projected water demand of 1,370 afy. In addition, the proposed project's demand was also accounted for within the commercial, industrial, and institutional (CII) and multiple-family billing classifications shown in Table 4.14-6 and as described in the City's 2010 UWMP.

¹⁰⁷ The BECSP WSA analyzed the potential for 6,400 new dwelling units; however, the BECSP was approved for 4,500 new dwelling units.

Table 4.14-10 Proposed Project Land Use and Water Demand

Land Use	Generation Rates	Proposed Project	
		Units	Total Demand
Residential	200 gpd/du	105 units	23.52 afy (21,000 gpd)
Retail-shop	0.15 gpd/sf	7,000 sf	1.18 afy (1,050 gpd)
Retail-market	0.15 gpd/sf	30,000 sf	5.04 afy (4,500 gpd)
Total			29.74 afy (26,550 gpd)(0.02 mgd)

SOURCE: PBS&J, *Water Supply Assessment for the Proposed Beach and Edinger Specific Plan Project*, Prepared for City of Huntington Beach (August 2009).

■ Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2011 CEQA Guidelines. For purposes of this EIR, implementation of the proposed project may have a significant adverse impact on utilities/service systems if it would do any of the following:

- Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or need new or expanded entitlements

■ Effects Not Found to Be Significant

No Effects Not Found to Be Significant have been identified with respect to water supply.

■ Impacts and Mitigation Measures

Threshold	Would the proposed project require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
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Impact 4.14-1 Implementation of the proposed project could require new water connections or expanded water conveyance systems. However, the project would not require or result in the construction of new or expanded water treatment facilities, the construction of which could cause significant environmental effects. This impact is considered *less than significant*.

The proposed project would allow for a maximum of 105 dwelling units, 7,000 sf of retail uses, and 30,000 sf of market uses. The water demand for the proposed project of 29.74 afy (0.02 mgd) was previously considered as a portion of the BECSP projected water demand of 1,370 afy or 1.2 mgd.¹⁰⁸

¹⁰⁸ The IS/NOP for the BECSP EIR contemplated a project consisting of 120 residential dwelling units, and a commercial component, totaling 71,000 sf of retail uses and a two-level health club for the project site. The project, as proposed, is 15 dwelling units and 34,000 sf of the commercial component less than the project contemplated for the project site in the BECSP EIR and WSA. The proposed project is only the second project proposed under the BECSP; therefore, there is sufficient capacity within the approved MAND and associated WSA to accommodate the proposed project.

As previously stated, the City receives approximately two-thirds of its water supply from groundwater wells and approximately one-third from imported water. For water supply planning purposes, this analysis assumes that demand from the proposed project would be met either from the groundwater system and/or with imported water. A discussion of the conveyance and treatment facilities necessary to serve the proposed project are discussed below.

Water Conveyance Infrastructure

The City operates a water supply system currently consisting of ten wells, three imported water connections, four storage and distribution reservoirs, and a variety of transmission and conveyance facilities. Wells vary in depth from 250 to 1,020 feet and range in production from 450 to 4,000 gpm. The total system capacity of the City's groundwater wells is 30,000 gpm.¹⁰⁹

The City also maintains three imported water connections to the Metropolitan system, and operates four storage and distribution reservoirs with a combined capacity of 55 million gallons (MG). The storage system is supported with four booster stations located at the reservoir sites. The booster pumps have a total capacity of 44,365 gpm, which is adequate to keep the system pressurized under peak flow conditions.¹¹⁰ The existing water pipes throughout the project site would provide some of the infrastructure necessary to provide water service to the proposed project. However, it is likely that new on-site and off-site improvements (both public and private) could be required to provide adequate service for the increase in water demand. This would be determined through the preparation of a hydraulic water study as required by code requirement BECSP CR4.14-1. Implementation of code requirement BECSP CR4.14-1 would ensure that adequate water infrastructure is developed to serve the proposed project. Construction of new water pipes would require demolition of surface improvements and excavation activities, which are proposed during project construction. If new infrastructure and other improvements are determined to be necessary, development would adhere to existing laws and regulations, and the water conveyance infrastructure shall be appropriately sized for each site-specific development, which includes potable water, domestic irrigation, and fire flow demands. Therefore, a ***less than significant*** impact would result.

BECSP CR4.14-1 A hydraulic water capacity analysis is required to determine the water improvements necessary to adequately protect the property per the Fire Department requirements. The developer shall be required to upgrade/improve the City's water system to meet the water demands to the property and/or otherwise mitigate the impacts of the project at no cost to the City. The developer shall coordinate this effort with the Public Works and Fire Departments and shall be responsible to pay the City for all related fees required to perform the analysis using the City's hydraulic water model.

Water Treatment Facilities

Metropolitan treats imported water at either the Diemer Filtration Plant or the Jensen Filtration Plant prior to distribution to its member agencies. The Diemer Filtration Plant has an operating capacity of 520 mgd and treats approximately 213 mgd, while the Jensen Filtration Plant currently has an operating

¹⁰⁹ City of Huntington Beach, Water Source, http://www.huntingtonbeachca.gov/Government/Departments/Public_Works/utilities/supply/ (accessed August 23, 2010).

¹¹⁰ City of Huntington Beach, Water Source, http://www.huntingtonbeachca.gov/Government/Departments/Public_Works/utilities/supply/ (accessed August 23, 2010).

capacity of 750 mgd and treats approximately 420 mgd.¹¹¹ If the proposed project's water demands were treated solely at either filtration plant, this increase would represent less than 1 percent of the remaining capacities of both facilities.

Because future development under the proposed project would represent such a small amount of the remaining operating capacity at both Diemer Filtration Plant and Jensen Filtration Plant, it is anticipated that the existing plants could adequately serve the additional demand generated the proposed project without requiring expansions to these facilities. This impact is considered *less than significant* and no mitigation is required.

Threshold	Would the proposed project have sufficient water supplies available to serve the project from existing entitlements and resources, or need new or expanded entitlements?
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Impact 4.14-2 **Implementation of the proposed project would generate an additional demand for water, but would not require water supplies in excess of existing entitlements and resources, or result in the need for new or expanded entitlements. This impact is *less than significant*.**

The proposed project would use water supplied through imported water purchases from Metropolitan and City-operated groundwater wells in the Santa Ana River Basin. These supplies would be delivered through existing City supply facilities and new water infrastructure constructed for delivery into specific project sites, per the requirements of the City of Huntington Beach. The proposed project would generate an increased demand for water of approximately 29.74 afy, as shown in Table 4.14- 10 above.

As shown in Table 4.14-9, if the City maintains Citywide demand as projected under this growth scenario in its 2010 UWMP, then supplies would exceed demand in all years beginning in 2010 and extending over the next 25 years to 2035. According to Table 4.14-9, the City of Huntington Beach has an adequate supply of water to meet the estimated 29.74 afy demand of the proposed project.

The water conservation and efficiency efforts improve supply reliability—in fact, the City reduced its demand by 2,228 acre-feet between 2008 and 2009. Further demand reduction could be achievable but at some point demand will “harden” and additional water conservation savings would be negligible. The state’s plumbing code, as changed last year, supports the use of dual plumbing systems that allow grey water or recycled water for toilet flushing or other non-potable uses in residential buildings. Additionally, water saving features inside residential units would help in this effort and could further reduce indoor residential water demand factors. In order to help meet the City’s conservation goals, the following project-specific conditions were incorporated in the BECSP EIR and shall be carried over to each development project within the BECSP. Mitigation measure BECSP MM4.14-1 would reinforce and expand upon the LEED-equivalent conditions for water efficiency and could further reduce the project’s demand on water resources.

¹¹¹ City of Huntington Beach, *Beach and Edinger Corridors Specific Plan Environmental Impact Report* (August 2009), Section 4.7 (Utilities/Services Systems).

BECSP MM4.14-1 The components of future projects in the Specific Plan area shall incorporate the following measures to ensure that conservation and efficient water use practices are implemented per project. Project proponents, as applicable, shall:

- *Require employees to report leaks and water losses immediately and shall provide information and training as required to allow for efficient reporting and follow up*
- *Educate employees about the importance and benefits of water conservation*
- *Create water conservation suggestion boxes, and place them in prominent areas*
- *Install signs in restrooms and cafeterias that encourage water conservation*
- *Assign an employee to evaluate water conservation opportunities and effectiveness*
- *Develop and implement a water management plan for its facilities that includes methods for reducing overall water use*
- *Conduct a water use survey to update current water use needs (processes and equipment are constantly upgrading, thus changing the need for water in some areas)*
- *Repair leaks; check the water supply system for leaks and turn off unnecessary flows*
- *Utilize water-efficient irrigation systems and drought tolerant plant palette and insure that sprinklers are directing water to landscape areas, and not to parking lots, sidewalks or other paved areas*
- *Adjust the irrigation schedule for seasonal changes*
- *Install low-flow or waterless fixtures in public and employee restrooms*
- *Instruct cleaning crews to use water efficiently for mopping*
- *Use brooms, squeegees, and wet/dry vacuums to clean surfaces before washing with water; do not use hoses as brooms; sweep or blow paved areas to clean, rather than hosing off (applies outside, not inside)*
- *Avoid washing building exteriors or other outside structures*
- *Sweep and vacuum parking lots/sidewalks/window surfaces rather than washing with water*
- *Switch from “wet” carpet cleaning methods, such as steam, to “dry,” powder methods; change window-cleaning schedule from “periodic” to “as required”*
- *Set automatic optic sensors on icemakers to minimum fill levels to provide lowest possible daily requirement; ensure units are air-cooled and not water-cooled*
- *Control the flow of water to the garbage disposal*
- *Install and maintain spray rinsers for pot washing and reduce flow of spray rinsers for prewash*
- *Turn off dishwashers when not in use—wash only full loads*
- *Scrape rather than rinse dishes before washing*
- *Operate steam tables to minimize excess water use*
- *Discontinue use of water softening systems where possible*
- *Ensure water pressure and flows to dishwashers are set a minimum required setting*
- *Install electric eye sensors for conveyor dishwashers*
- *Install flushometer (tankless) toilets with water-saving diaphragms and coordinate automatic systems with work hours so that they don’t run continuously*

- *Use a shut-off nozzle on all hoses that can be adjusted down to a fine spray so that water flows only when needed*
- *Install automatic rain shutoff device on sprinkler systems*

In addition, the City's Water Efficient Landscape ordinance (Municipal Code 14.52) is designed to reduce new water demand at developments. The ordinance guides new development projects through the process of designing, installing and maintaining water efficient landscaping. Future use of recycled or gray water at the project site would further reduce demand on citywide water supplies and water supplies needed to serve the proposed project. Because the reduction of outdoor water use is where the greatest amount of water can be saved, it is essential that the project implement this ordinance. Code requirement BECSP CR4.14-2 would ensure that the project would comply with the City's Water Efficient Landscape ordinance.

BECSP CR4.14-2 Prior to the issuance of a building permit for this proposed project, the Applicant shall demonstrate compliance with the City's Water Efficient Landscape ordinance (Municipal Code 14.52) in a manner approved by the City Departments of Planning and Public Works.

The City's conservation programs coupled with implementation of mitigation measure BECSP MM4.14-1 and code requirement BECSP CR4.14-2 would ensure that the proposed project's contribution to the BECSP demand is held to a minimum through project-level demand reductions. Therefore, the impact to water supplies would be ***less than significant***.

4.14.4 Cumulative Impacts

The geographic context for the analysis of cumulative impacts associated with water systems would be within Metropolitan's regional boundaries and the service area of the City of Huntington Beach.

Threshold	Would the proposed project require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
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■ Conveyance Infrastructure

All cumulative development, including the proposed project could include the construction of necessary water conveyance pipeline upgrades, both on and off site, to serve future development. Per City requirements, the water lines associated with new development are required to be sized appropriately for the anticipated design average day demand and appropriate peaking factors. Construction of water conveyance infrastructure is considered an integral part of the overall construction plan of any development, when required. Because all cumulative development, including the proposed project, would be required to adhere to existing laws and regulations, and the infrastructure would be appropriately sized for each site-specific development, this is considered a ***less than significant*** cumulative impact.

■ Treatment Facilities

The City uses flexible operational procedures to deliver water to its customers, and in doing so it switches supply flows in order to keep seasonal reliability high and water moving through the conveyance

facilities. The demand for groundwater generated by existing and cumulative development is not anticipated to require additional treatment facilities because wellhead treatment is provided directly at the originating wells prior to distribution throughout the City's service area.

Metropolitan treats imported water at either the Diemer Filtration Plant or the Jensen Filtration Plant prior to distribution to its member agencies or retail purchases. As stated previously, the Diemer Filtration Plant has an operating capacity of 550 mgd and currently produces approximately 213 mgd, while the Jensen Filtration Plant currently has an operating capacity of 750 mgd and currently produces approximately 420 mgd. If the City's 2010 water demands of 31,845 afy (24.4 mgd) were treated solely at either filtration plant, this increase would represent less than 1 percent of the remaining capacities of both facilities.

Because existing and cumulative development within the City represents a fraction of the remaining operating capacity at both Diemer Filtration Plant and Jensen Filtration Plant along with the groundwater supplies, it is anticipated that the existing plants and wells could adequately serve the City's demands without requiring expansions to these facilities. In terms of groundwater, the wellhead treatment systems associated with the City's ten wells can adequately treat the water demands associated with the City's existing and planned future uses.

Metropolitan manages and maintains its treatment plants; any improvements or expansions are the responsibility of Metropolitan and would not adversely affect the City nor is not necessary for the City to operate a proprietary water treatment plant. In order to ensure proper distribution, Metropolitan also manages the regional conveyance system used to transport potable water supplies to the retail water agencies. Therefore, as a result of anticipated cumulative growth in water demand within the City's service area, no new or expanded water treatment facilities. Therefore, this cumulative impact is considered *less than significant*.

Threshold	Would the proposed project have sufficient water supplies available to serve the project from existing entitlements and resources, or need new or expanded entitlements?
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Total potable supplies within the City are composed of local groundwater and imported water. In the 2010 water year, the City pumped approximately 62 percent of its water supply from groundwater wells accessing the Santa Ana River groundwater basin and purchased 38 percent from Metropolitan through MWDOC. These percentages are established through OCWD's allowable BPP. The BPP is typically set by OCWD on an annual basis. However, OCWD does have the option of revising the BPP as needed. Actual percentages vary somewhat on an annual basis depending on the extent in-lieu delivery programs are implemented and groundwater levels (e.g., in 2003/04, the City's water supply was 66 percent imported water and 34 percent groundwater). Current and projected water supplies from imported water and groundwater are shown in Table 4.14-1 above.

In years of low precipitation MWDOC's WSAP formula is used to determine water supplies to the City under the current hydrologic conditions. Base Period supplies were formulated by calculating supply deliveries for three previous years and then factoring in conservation credits and other specific adjustments. Therefore, for comparison purposes normal "Base Year" supply, and various demand scenario comparisons are presented in this analysis.

Future projects would use water supplied through imported water purchases from Metropolitan and City-operated groundwater wells in the Santa Ana River Basin. These supplies would be delivered through existing City supply facilities and new water infrastructure constructed for delivery onto specific project sites, per the requirements of the City of Huntington Beach. Build-out of the City would generate an increased demand for water of approximately 2,040 afy (between 2015 and 2035), of which 29.74 afy would be contributed to the proposed project, as shown above in Table 4.14-9.

As shown in Table 4.14-9 above, if the City continues to maintain demand under this scenario, then supplies would exceed demand in all years beginning in 2015 and extending over the next 20 years. Water demand trends within the City have been decreasing (refer to Table 4.14-5 Historical Demand [2001–2010]) and are expected to decrease further as citywide conservation measures take hold and per capita water use continues to decrease through water conservation technology improvements, education, and public awareness. To further this trend, the legislation in SBx 7-7 (20x2020 water conservation plan) requires per capita water demand to decrease by 10 percent in 2015 and 20 percent in 2020; therefore, it is reasonable to assume that overall demand within the City’s service area would continue to decrease until demand “hardens” and meets its minimum consumptive use. This scenario assumes demand stabilizes at or near its current low point and then would not return to pre-drought conditions.

The City, through its permitting process can require all future projects to comply with all current and any new City policies and ordinances, implement water efficiency measures to be identified in the City’s future Water Use Efficiency Master Plan, and increase the conservation level per the City’s adopted Urban Water Management Plan. As required in the City’s Water Efficient Landscape Ordinance project-level design guidelines for landscape require installation of efficient irrigation and the use of a native, drought-resistant plant palette. Additionally, actual structural components of the proposed project can be designed equivalent to United States Green Building Council (USGBC) standards, which include standards for water efficiency.

The City has demonstrated water reductions over the last 10 years of approximately 8.6 percent; however, according to data in Table 4.14-5 (Historical Demand) it appears that demand has declined significantly. Demand decreases could be contributed to significant conservation efforts, and loss of tourism and customer accounts due to the continuing decline in economic conditions, among other factors. It should be noted that at some point in the future, water demand will hit a point at which water conservation savings will harden (stay fixed) and further savings will not be observed. Further, this also assumes that demand stabilizes at or near its current low point and then would not return to pre-drought conditions. As modeled in this analysis, if citywide water demand remains near 33,000 acre-feet and additional supplies remain stable and consistent then the proposed project’s cumulative impact on water supplies would be *less than significant*.

4.14.5 References

- Huntington Beach, City of. *Beach and Edinger Corridors Specific Plan Environmental Impact Report*. Section 4.7 (Utilities/Services Systems), August 2009.
- . *Urban Water Management Plan*, 2005.
- . Water Source. http://www.huntingtonbeachca.gov/Government/Departments/Public_Works/utilities/supply/ (accessed November 22, 2010).

———. *2010 Draft Urban Water Management Plan*, 2010.

Menlo Park, City of. *Draft Water Supply Assessment*. KEMA Memorandum, June 2009.

Municipal Water District of Orange County. Meeting of the Board of Directors of the Municipal Water District of Orange County, June 14, 2010.

PBS&J. *Water Supply Assessment for the Proposed Beach and Edinger Specific Plan Project*. Prepared for City of Huntington Beach, August 2009.

Wastewater

This section describes the current status of wastewater services in the City of Huntington Beach, including a discussion of the ability of the City's wastewater services to meet the current needs of the City. Data for this section were taken from *Water Supply Assessment for the Beach-Edinger Corridors Specific Plan* (WSA), the *Beach and Edinger Corridors Specific Plan (BECSP) Sewer Analysis Report*, as well as contacts with utility providers and City staff. Full reference-list entries for all cited materials are provided in Section 4.14.10 (References).

4.14.6 Environmental Setting

The City owns, operates, and maintains a wastewater collection system that includes gravity pipelines, manholes, lift stations, and force mains. This system serves over 95 percent of the areas within the City, and several small areas within the cities of Westminster, Seal Beach, Newport Beach, and Fountain Valley. The City's wastewater system would provide service to the proposed project and connects to an Orange County Sanitation District (OCSD) regional trunk sewer line that ultimately flows to a reclamation plant operated by OCSD.¹¹²

■ Infrastructure

The City's collection system is comprised of approximately 385 miles of wastewater pipelines ranging in size from 6 to 30 inches in diameter. Approximately 85 percent of the City's wastewater pipelines are 8 inches in diameter. Due to the City's generally flat topography, the City also operates and maintains 28 lift stations ranging in capacity from approximately 80 gpm to 1,350 gpm. These facilities lift sewage from low points in the collection system to manholes at higher locations.¹¹³

Existing sewer lines operated by the City would serve the proposed project. Currently there is an existing 8-inch-diameter sanitary sewer line, running along the Beach frontage of the project site. The City's local system generally discharges to larger OCSD facilities to convey wastewater to the local reclamation plant. Given the growth within OCSD's service area, OCSD is currently upsizing a number of collection system pipelines to provide additional capacity.

OCSD is responsible for receiving, treating, and disposing of the wastewater generated in central and northwest Orange County, including the City's wastewater. In this regional management capacity, OCSD owns, operates, and maintains the majority of the "backbone" wastewater collection trunk pipelines. The sewer system consists of 12 trunk sewer systems ranging in size from 12 to 96 inches in diameter and

¹¹² City of Huntington Beach, *Sewer Master Plan—Final Report* (May 2003).

¹¹³ City of Huntington Beach, *Sewer Master Plan—Final Report* (May 2003).

collectively over 500 miles long. Additionally, there are 39 sewer interconnections and 87 diversions to maximize conveyance of flows through the system. Twenty pump stations are used to pump sewage from lower lying areas to the reclamation plants.¹¹⁴

No existing capacity issues have been identified in the OCSD system, and OCSD has developed engineering plans for plant improvements anticipated to meet area demands to the year 2050.¹¹⁵

■ Reclamation Plants

OCSD manages wastewater collection and treatment for approximately 480 square miles in central and northwest Orange County, which includes 23 cities, 3 special districts, and 2.6 million residents.¹¹⁶ OCSD has two operating facilities that treat wastewater from residential, commercial, and industrial sources in central and northwest Orange County. The quantities of wastewater are generally proportional to the population and water use in the service area.

OCSD's Reclamation Plant No. 1 is located in the City of Fountain Valley, about four miles northeast of the ocean and adjacent to the Santa Ana River. The plant provides advanced primary and secondary treatment through an activated sludge system. The secondary effluent is either blended with the advanced primary effluent and routed to the ocean disposal system, or is sent to the Orange County Water District facilities for advanced treatment and recycling.¹¹⁷ Current primary treatment capacity for Reclamation Plant No. 1 is 204 mgd of wastewater,¹¹⁸ with an average daily flow of 97 mgd.¹¹⁹ Remaining capacity at this plant is 107 mgd. The plant is designed to provide secondary treatment to 122 mgd.¹²⁰ Reclamation Plant No. 1 is currently being upgraded to add 60 mgd of secondary treatment capacity and has the estimated completion date of fall 2011.¹²¹

Reclamation Plant No. 2 is located in the City of Huntington Beach adjacent to the Santa Ana River and about 1,500 feet from the ocean. This plant provides a mix of advanced primary and secondary treatment. The plant receives raw wastewater through five major sewers. Approximately 33 percent of the influent receives secondary treatment through an activated sludge system, and all of the effluent is discharged into the ocean disposal system. OCSD's treated wastewater is discharged through a 120-inch outfall at a depth of about 200 feet below sea level and nearly 5 miles offshore from the mouth of the Santa Ana River.¹²² Current capacity for Reclamation Plant No. 2 is 168 mgd of primary treated wastewater and 90 mgd of secondary treated wastewater.¹²³ The current average flow is 110 mgd; thus,

¹¹⁴ City of Huntington Beach, *Urban Water Management Plan* (2005).

¹¹⁵ PBS&J, *Beach and Edinger Corridors Specific Plan Sewer Analysis Report* (August 2009).

¹¹⁶ Orange County Sanitation District, *Miscellaneous Statistics* (September 2, 2010).

¹¹⁷ City of Huntington Beach, *Urban Water Management Plan* (2005).

¹¹⁸ Orange County Sanitation District, *Operations and Maintenance 2008–09 Annual Report* (November 2009).

¹¹⁹ Orange County Sanitation District, *Miscellaneous Statistics* (September 2, 2010).

¹²⁰ City of Huntington Beach, *Urban Water Management Plan* (2005).

¹²¹ Orange County Sanitation District, Fountain Valley Wastewater Reclamation Facility, http://www.ocsd.com/construction/fountain_valley_wastewater_reclamation_facility/default.asp (accessed November 22, 2010).

¹²² City of Huntington Beach, *Urban Water Management Plan* (2005).

¹²³ City of Huntington Beach, *Urban Water Management Plan* (2005).

remaining capacity at this plant is approximately 58 mgd.¹²⁴ This plant is currently being upgraded to add 60 mgd of secondary treatment capacity and has the estimated completion date of spring 2012.¹²⁵

4.14.7 Regulatory Framework

Refer to Section 4.14.5 (Regulatory Framework) of the BECSP Program EIR, for applicable federal, state, and local regulations that would apply to the proposed project. No new regulations have been implemented since the certification of the Program EIR.

The BECSP Development Code, which includes development standards, development regulations, and guidelines, governs all development actions with the BECSP area, including the proposed project site. The proposed project would be subject to development standards specific to the proposed project site's BECSP designations of Town Center Neighborhood, included as BECSP Section 2.1.4 (Town Center Neighborhood).

■ General Plan and BECSP Consistency Analysis

Implementation of the proposed project would include the construction of necessary utilities on-site, including wastewater conveyance lines. The sewer lines would need to be sized appropriately for the anticipated flow of approximately 33,650 gpd of wastewater from the proposed project. As discussed in the impact analysis, it is anticipated that the increased flows from the proposed project would not result in required upgrades to the existing OCSD treatment plants. However, implementation of code requirements BECSP CR4.14-3 and BECSP CR4.14-4 would ensure that capacity constraints at the time of development are accurately identified. The construction of wastewater conveyance lines in accordance with the projected size and outflow of the project site would not conflict with the applicable goals, objectives, and policies of the City's General Plan Utilities Element.

4.14.8 Project Impacts and Mitigation

■ Analytic Method

To determine wastewater impacts associated with future development for the proposed project, estimated future wastewater flows are compared to the capacity of the wastewater treatment plants to determine whether sufficient capacity, as well as infrastructure, exists and/or whether there is a need for additional wastewater treatment systems. The estimates of sewer flow are slightly higher than the estimates of water demand. Table 4.14-11 (Estimated Sewer Flows for the Proposed Project) shows the estimated sewer flow calculations for proposed project.

¹²⁴ Orange County Sanitation District, Facts and Key Statistics, <http://www.ocsd.com/civica/filebank/blobdload.asp?BlobID=1700> (accessed November 22, 2010).

¹²⁵ Orange County Sanitation District, Huntington Beach Wastewater Reclamation Facility, <http://www.ocsd.com/construction/p2/default.asp> (accessed November 22, 2010).

Table 4.14-11 Estimated Sewer Flows for the Proposed Project

<i>Land use</i>	<i>Quantity</i>	<i>Duty Factor</i>	<i>Estimated Flow</i>
Residential	105 du	250 gpd/du	26,250 gpd
Retail	7,000 sf	0.2 gpd/sf	1,400 gpd
Market	30,000 sf	0.2 gpd/sf	6,000 gpd
Total	—	—	33,650 gpd (0.034 mgd) (37.69 afy)
Total Peak Hourly Discharge		$1.78(Q_{ave})^{0.92}$	0.08 mgd

SOURCE: City of Huntington Beach, *Beach and Edinger Corridors Specific Plan Environmental Impact Report* (August 2009), Section 4.7 (Utilities/Services Systems); PBS&J, *Beach and Edinger Corridors Specific Plan Sewer Analysis Report* (August 2009).

du = dwelling unit, gpd = gallons per day; MGD = million gallons per day; Q = discharge; ave = average

a. City of Huntington Beach, *Beach and Edinger Corridors Specific Plan Sewer Analysis Report*, Peak Flow equation.

■ Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2011 CEQA Guidelines. For purposes of this EIR, implementation of the proposed project may have a significant adverse impact on utilities/service systems if it would do any of the following:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board
- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
- Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments

■ Effects Not Found to Be Significant

No Effects Not Found to Be Significant have been identified with respect to wastewater.

■ Impacts and Mitigation Measures

Threshold	Would the proposed project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
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Impact 4.14-3 Implementation of development of the proposed project would not exceed wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board. This impact would be *less than significant*.

The NPDES permit system requires that all existing and future municipal and industrial discharges to surface waters within the City be subject to specific discharge requirements. Implementation of the proposed project would result in the discharge of wastewater to the project's sewer system, which would ultimately be treated at one or more of the OCSD wastewater treatment plants. The OCSD wastewater treatment plants are permitted for and required to comply with their associated waste discharge requirements (WDRs). WDRs set the levels of pollutants allowable in water discharged from a facility.

Compliance with all applicable WDRs, as monitored and enforced by the OCSD, would ensure that development under the proposed project would not exceed the allowable wastewater treatment requirements of the SARWQCB with respect to discharges to the sewer system. This would result in a ***less than significant*** impact. No mitigation measures are required.

Threshold	Would the proposed project require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
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Impact 4.14-4 **Implementation of the proposed project would require new sewer connections, and could require or result in the construction of new or expanded wastewater conveyance systems. With implementation of code requirements BECSP CR4.14-3, BECSP CR4.14-4, and Project CR4.14-5, this impact would be reduced to a *less than significant* level.**

The City of Huntington Beach Public Works Department and OCSD maintain the sanitary sewer system into which the proposed project would discharge. The proposed project would allow for a maximum development of 105 residential units, 7,000 sf of retail uses, and 30,000 sf of market uses. Implementation of the proposed project would increase the amount of wastewater transported by the City's sewer system by an average daily flow of approximately 0.034 mgd; a peak flow of 0.08 mgd.

As identified in the *BECSP Sewer Analysis Report*, discharges associated with development as assumed under the build-out of the proposed BECSP are expected to exceed the capacity of several existing sewer systems and require upsizing at several locations.¹²⁶ However, the proposed project does not lie within the drainage boundaries of one of the said deficient systems. As identified in the *BECSP Sewer Analysis Report*, Figure 2C (Specific Plan Required Sewer Upgrades (Five Points District/Neighborhood Parkway)), the proposed project would not require an upgrade to the sewer lines.¹²⁷

In order to confirm that the proposed project does not contribute to the exceedance of one of the City's wastewater collection systems, prior to allowing additional connections to the sewer lines, the capacity of the existing sewers would need to be confirmed. A sewer study would be needed at the time of development to determine the extent to which the existing connection sewer lines need to be upgraded to accommodate the proposed project's sewer flow. The project developer(s) would be responsible for constructing local mains and extensions to serve the proposed project. Implementation of code requirements BECSP CR4.14-3 and BECSP CR4.14-4 would ensure that capacity constraints at the time of development are accurately identified.

BECSP CR4.14-3 *Prior to issuance of a Precise Grading or Building Permit, the Applicants shall prepare a sewer analysis and submit it to the Department of Public Works for review and approval. Data from a 14-day or longer flow test shall be included in the analysis. This analysis shall specifically identify constraints and system deficiencies, including requirements for new connections or upgrades to existing stubout connections, associated with development of the proposed project. In addition, OCSD shall confirm that there is capacity in the existing main and trunk sewer lines serving the proposed project.*

¹²⁶ PBS&J, *Beach and Edinger Corridors Specific Plan Sewer Analysis Report* (August 2009).

¹²⁷ PBS&J, *Beach and Edinger Corridors Specific Plan Sewer Analysis Report* (August 2009), Figure 3-2C (Specific Plan Required Sewer Upgrades [Five Points District/Neighborhood Parkway]).

Further, this analysis shall identify whether or not the existing system is deficient in proximity to the proposed project. If the proposed project triggers a deficiency in the overall sewer system, the proposed project will be required to upgrade the system per the recommendations of the BECSP, the Department of Public Works requirements, and the project-specific study.

If the sewer study for the proposed project shows no immediate deficiency (i.e., the system has adequate capacity for the proposed project), the applicant may be required to pay a fair share to the party responsible for installation of necessary system upgrades in the future, as it will, at a minimum contribute to the future system-wide deficiency identified in the BECSP EIR.

BECSP CR4.14-4 *For each individual project, the OCSD shall confirm that there is capacity in the existing main and trunk sewer lines serving the individual projects that may be developed in accordance with the proposed Specific Plan.*

Code requirements BECSP CR4.14-3 and BECSP CR4.14-4 would require that a sewer study is conducted to determine the extent to which the existing sewer lines would require upgrades. In addition, construction of the wastewater collection systems would adhere to existing laws and regulations, including the Construction General NPDES permit, and the infrastructure would be sized appropriately for the proposed project. If off-site infrastructure upsizing is necessary, a permit would need to be obtained from the City and the Applicant would be required to design and construct these improvements per the requirements of the Department of Public Works Standard Plans and Construction General Permit.

In addition, any development connecting directly or indirectly to the OCSD sewer system is required to pay a connection fee in accordance with the OCSD Connection Fee Master Ordinance. With respect to discharges that constitute an increase in the existing quantity of wastewater attributable to a particular parcel or operation already connected, the connection fee shall be based on the increase in anticipated use of the sewage system. The Connection Fee Program ensures that all users pay their fair share of any necessary expansion of the system, including expansion to wastewater treatment facilities. These fees are considered full mitigation for OCSD under CEQA for potential impacts resulting from project development.

Because the proposed project would require or result in the construction of new or expanded wastewater conveyance infrastructure, code requirement Project CR4.14-5 requires the developer to pay full mitigation fees of all impacts of the proposed project on utilities, including wastewater. These fees are designed to represent the fair share of the new development toward the cost of planned (future) utilities. The following code requirement Project CR4.14-5 shall be implemented, as required by statute, ordinance, or code:

Project CR4.14-5 *The project developer(s) shall pay all applicable impact fees for wastewater and other utilities as established by the City of Huntington Beach.*

Construction of the wastewater collection systems would adhere to existing laws and regulations, and the infrastructure would be sized appropriately for the proposed project. Individual water and wastewater connections would occur as part of the proposed project site. In addition, code requirements BECSP CR4.14-3, BECSP CR4.14-4, and Project CR4.14-5 would ensure that proper sewer connections are provided for at the proposed project site. Therefore, this impact is considered ***less than significant***.

Threshold	Would the proposed project result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
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Impact 4.14-5 **Implementation of the proposed project would not increase wastewater generation such that treatment facilities would be inadequate to serve the project's projected demand in addition to the provider's existing commitments. This impact is considered *less than significant*.**

The proposed project would result in wastewater generation of approximately 33,650 gpd of wastewater (0.034 mgd); peak flow of 0.08 mgd. This would increase the demand upon regional treatment facilities. Remaining capacity at Reclamation plant No. 1 is approximately 107 mgd and the remaining capacity at Reclamation Plant No. 2 is approximately 58 mgd. As such, the reclamation plants would have adequate capacity to treat the 0.034 mgd of wastewater that would be generated from the proposed project. The proposed project would represent less than 1 percent of the remaining capacity at both Reclamation Plants. Additionally, OCSd is already in the construction phase of upgrading facilities to expand treatment capacity at both reclamation plants to add approximately 60 mgd of secondary treatment at each plant. Further, water conservation measures, as required for ensuring adequate water supplies, would also serve to reduce wastewater generation with development of the proposed project.

Consequently, construction or expansion of wastewater treatment facilities is not anticipated to be necessary to serve the proposed project's needs. The OCSd has adequate treatment capacity available over the long term to serve the proposed project. In addition, the proposed project would be required to adhere to existing laws and regulations associated with wastewater discharge and treatment requirements. Therefore, the proposed project's impacts on wastewater treatment facilities are *less than significant*.

4.14.9 Cumulative Impacts

Threshold	Would the proposed project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
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The City as a whole operates under several Waste Facility Discharge permits from RWQCB. The RWQCB, in connection with the implementation of the NPDES program, has imposed requirements on the treatment of wastewater and its discharge into local water bodies. Wastewater produced from the proposed project would meet these requirements due to treatment capacity available at the OCSd reclamation plants and the implementation of wastewater BMPs (refer to mitigation measure BECSP MM4.7-1 in Section 4.7 [Hydrology/Water Quality]). The proposed project would develop residential and commercial uses but would not include any industrial uses or science research facilities. For this reason, the proposed project would not discharge pollutants such as industrial sludge, noxious gasses, medical wastes, or radioactive materials. However, the proposed project would generate wastewater that would include typical residential and employee wastes. To ensure that the proposed project would not exceed wastewater treatment requirements, all cumulative development, including the proposed project, would adhere to all local, state, and federal regulations. With adherence to these existing requirements

and requirements established by the NPDES permit, the cumulative impact of the proposed project is ***less than significant***.

Threshold	Would the proposed project require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
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Cumulative impacts from future growth within the City regarding sewer line capacity (sewage treatment capacity is addressed above) is mitigated on a project-by-project basis (existing sewer lines adequate for existing development). To the extent that future projected growth within the City would result in the treatment capacity of the wastewater treatment plant being inadequate, each project would be required to mitigate their individual impacts to wastewater treatment facilities, and any potential increase in the demand for wastewater treatment facilities would require the payment of fees to upgrade the impacted wastewater systems. Implementation of code requirements BECSP CR4.14-3, BECSP CR4.14-4, and Project CR4.14-5 would ensure that capacity constraints at the time of development are accurately identified and sewer connections are provided for at the proposed project site. The proposed project and future proposed in the surrounding area would not make a cumulatively considerable contribution to the overall impact. Future projects would be required to pay fees and develop construction schedules that would reduce the overall impacts to current and future residents in the area. The cumulative impact of the proposed project would be ***less than significant***.

Threshold	Would the proposed project result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
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Development of cumulative projects within the OCSD service area would generate additional quantities of wastewater, depending on net increases in population, square footage of development, and intensification of uses. These projects would contribute to the overall regional demand for wastewater treatment service. OCSD Reclamation Plant No. 2, which would be the primary treatment plant of the area around Huntington Beach, is currently operating at 151 mgd of wastewater. Although the plant is designed to treat approximately 168 mgd of wastewater, and thus is below operating capacity, according to OCSD, plans are currently in place to upgrade the plant's total treatment capacity. Implementation of the proposed project would generate approximately 0.034 mgd (peak flow 0.08 mgd) of wastewater, which represents less than 1 percent of the total current capacity of the plant. In addition, all future development in the City would be required to implement water conservation measures that would result in a decrease in wastewater generation, ensuring that capacity of the existing treatment plants would not be exceeded with future development. Therefore, since the existing treatment plants can currently accommodate excess capacity, this is considered to be a ***less than significant*** cumulative impact.

4.14.10 References

- Huntington Beach, City of. *Beach and Edinger Corridors Specific Plan Environmental Impact Report*. Section 4.7 (Utilities/Services Systems), August 2009.
- . *Sewer Master Plan—Final Report*, May 2003.

- . *The Village of Bella Terra*. Section 4.13 (Utilities/Services System), 2008.
- . *Urban Water Management Plan*, 2005.
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<http://www.ocsd.com/construction/p2/default.asp> (accessed September 22, 2010).
- . Miscellaneous Statistics, September 2, 2010.
- . *Operations and Maintenance 2008–09 Annual Report*, November.
- PBS&J. *Beach and Edinger Corridors Specific Plan Sewer Analysis Report*, August 2009.
- . *Water Supply Assessment for the Proposed Beach-Edinger Corridors Specific Plan*, August 2009.

Solid Waste

This section describes the current status of solid waste services in the City of Huntington Beach, including a discussion of the ability of the City's solid waste services to meet the current needs of the City. Solid waste is defined as refuse requiring collection, recycling, or disposal into a landfill.

Data for this section were taken from communication with service providers and online resources. Full reference-list entries for all cited materials are provided in Section 4.14.15 (References).

4.14.11 Environmental Setting

Rainbow Disposal is the exclusive hauler of all solid waste for the City of Huntington Beach. Rainbow Disposal has an agreement with the City to haul commercial waste but will not take liquids or hazardous materials, such as paint, oil, solvents, chemicals, or tires per state law. In addition, they do not accept sod, manure, lumber, concrete, or construction debris. However, the County of Orange provides free household hazardous waste collection centers, one of which is located at the Rainbow Disposal Transfer Station in Huntington Beach, which is further discussed below.

Rainbow Disposal operates a Transfer Station, located at 17121 Nichols Street within the City of Huntington Beach, and two Materials Recovery Facilities (MRFs) through which all solid waste is processed. A transfer station is a solid waste facility where smaller refuse-collection vehicles dump their loads of waste onto a tipping floor. This waste is then placed into larger transfer vehicles for transport to the point of ultimate disposal. Use of this type of facility reduces hauling costs and also reduces the number of trucks on the highway. Rainbow Disposal's Transfer Station has a design capacity of 2,800 tons per day, and currently receives approximately 1,800 to 2,000 tons per day. Currently, the Rainbow Disposal's Transfer Station is operating at approximately 71 percent capacity.¹²⁸ At the MRFs,

¹²⁸ City of Huntington Beach, *Beach and Edinger Corridors Specific Plan Environmental Impact* (August 2009), Section 4.14 (Utilities/Service Systems), p. 4.14-39.

trash is mechanically and manually sorted in order to ensure that the maximum amount of waste is recycled and the minimum amount is separated for landfill disposal.

One MRF primarily processes residential solid waste, and the other MRF processes residential and quasi-industrial solid waste, including construction waste. Construction-related waste is processed at various steps including sorting at the site followed by sorting at the tipping deck at the MRF. Thus, construction-related solid waste is processed via a primary and secondary sort, while the majority of solid waste is processed solely through a secondary (or dirty) sort.

As of 2006, which represents the most recent data available, the City of Huntington Beach maintained a 71 percent diversion rate from the Orange County landfills, which exceeds the AB 939 requirement of 50 percent diversion of solid waste by the Year 2000.¹²⁹

The Orange County Integrated Waste Management Department (IWMD) currently owns and operates three active landfills that serve the Orange County region, including: Frank R. Bowerman Landfill in Irvine; Olinda Alpha Landfill in Brea; and Prima Deshecha Landfill in San Juan Capistrano. All three landfills are permitted as Class III landfills and have a combined design capacity of 20,500 tons per day. Class III landfills accept only non-hazardous municipal solid waste for disposal; no hazardous or liquid waste is accepted. Table 4.14-12 (Landfill Capacity) shows the existing capacities of each of these landfills, as well as their anticipated closure dates and annual usage.

Table 4.14-12 Landfill Capacity

Landfill	Location	Current Remaining Capacity (tons)	Maximum Capacity (Tons)	Estimated Close Date	Maximum Daily Load (tons)
Frank R. Bowerman	11002 Bee Canyon Access Road Irvine, CA 92602	59,411,872	127,000,000	2022	8,500
Olinda Alpha	1942 North Valencia Avenue Brea, CA 92823	38,578,383	74,900,000	2013	8,000
Prima Deshecha	32250 La Pata Avenue San Juan Capistrano, CA 92675	87,384,799	172,900,000	2067	4,000

SOURCE: California Integrated Waste Management Board, Active Landfill Profile for Frank R. Bowerman Landfill, <http://www.calrecycle.ca.gov/profiles/Facility/Landfill/LFProfile1.asp?COID=30&FACID=30-AB-0360> (accessed November 22, 2010); California Integrated Waste Management Board, Active Landfill Profile for Olinda Alpha Sanitary Landfill, <http://www.calrecycle.ca.gov/profiles/Facility/Landfill/LFProfile1.asp?COID=30&FACID=30-AB-0035> (accessed November 22, 2010); California Integrated Waste Management Board, Active Landfill Profile for Prima Deshecha Sanitary Landfill, <http://www.calrecycle.ca.gov/profiles/Facility/Landfill/LFProfile1.asp?COID=30&FACID=30-AB-0019> (accessed November 22, 2010).

The City is under contract to the County's IWMD to dispose of all waste to the County landfill system (not a particular facility) until the Year 2010. The Orange County landfill system is anticipated to have adequate capacity to operate until 2067.¹³⁰ Currently, solid waste from the project site is sent to the Frank

¹²⁹ California Integrated Waste Management Board, Jurisdiction Profile for Huntington Beach (Diversion Rate), <http://www.calrecycle.ca.gov/Profiles/Juris/JurProfile1.asp?RG=C&JURID=205&JUR=Huntington+Beach> (accessed November 22, 2010).

¹³⁰ Orange County Waste and Recycling, Orange County Landfill System, <http://www.ocgov.com/portal/site/ocgov/menuitem.02b739dec30413a69add603d100000f7/?vgnnextoid=b9c856424c63a110VgnVCM1000005b00610aRCRD&vgnnextchannel=b6d41414b02f8110VgnVCM1000005b00610aRCRD&vgnnextfmt=default> (accessed September 21, 2010).

R. Bowerman Landfill in Irvine. Permitted capacity for the landfill is limited to 8,500 tons per day. Therefore, if the per day capacity is reached at the Bowerman Landfill trucks are diverted to one of the other two landfills (Olinda Alpha in Brea and Prima Deshecha in San Juan Capistrano) in the county.

The Regional Landfill Options for Orange County (RELOOC) Strategic Plan is a long-range strategic planning project initiated by IWMD to assess the County's existing disposal system capabilities and develop viable long-range solid waste disposal options for the County. As discussed in the latest 2007 Strategic Plan Update, Frank R. Bowerman is currently scheduled to close in 2022 but upon completion of the Plan's short-term strategy No. 2, the scheduled closure date will be 2053. In addition, Olinda Alpha is currently scheduled to close in 2013 but upon completion of the Plan's short-term strategy No. 3, the scheduled closure date will be 2021. IWMD remains committed to the implementation of both the Phase 1 (short-term) and Phase 2 (long-term) strategies identified within the Plan.¹³¹

The California Integrated Waste Management Board (CIWMB) requires that all counties have an approved Countywide Integrated Waste Management Plan (CIWMP). To be approved, the CIWMP must demonstrate sufficient solid waste disposal capacity for at least fifteen years, or identify additional available capacity outside of the County's jurisdiction. To this end, the RELOOC program, a 40-year Strategic Plan, was created. RELOOC evaluates options for trash disposal for Orange County citizens and ensures that waste generated by the County is safely disposed of and that the County's future disposal needs are met.

4.14.12 Regulatory Framework

Refer to Section 4.14.8 (Regulatory Framework) of the BECSP Program EIR, for applicable federal, state, and local regulations that would apply to the proposed project. No new regulations have been implemented since the certification of the Program EIR.

The BECSP Development Code, which includes development standards, development regulations, and guidelines, governs all development actions with the BECSP area, including the proposed project site. The proposed project would be subject to development standards specific to the proposed project site's BECSP designations of Town Center Neighborhood, included as BECSP Section 2.1.4 (Town Center Neighborhood).

■ General Plan and BECSP Consistency Analysis

The proposed project site would be served by Rainbow Disposal, which has been contracted by the City to maintain solid waste disposal needs. No actions brought forth by the proposed project would be in conflict with the goals outlined in the Utilities Element of the City's General Plan.

¹³¹ Integrated Waste Management Department, Regional Landfill Options for Orange County, Strategic Plan Update 2007, <http://www.ocgov.com/vgnfiles/ocgov/OC%20Waste/Docs/RELOOC%20Strategic%20Plan%20Update%202007.pdf> (accessed November 22, 2010).

4.14.13 Project Impacts and Mitigation

■ Analytic Method

The proposed project would result in a maximum of 105 dwelling units, 7,000 sf of retail uses and 30,000 sf of market uses (Table 4.14-17 [Waste Generated from Existing Land Uses and Proposed Project], below). To determine the amount of solid waste generated by the proposed project, solid waste generation factors identified by the CIWMB in its *Estimated Solid Waste Generation Rates*¹³² and the generation factors are applied to the square footage for the retail component and each residential unit of the proposed project. To determine solid waste impacts associated with implementation of the proposed project, estimated future solid waste generation amounts are compared to the total anticipated remaining capacity at landfills that serve the City to determine whether adequate capacity exists.

■ Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2011 CEQA Guidelines. For purposes of this EIR, implementation of the proposed project may have a significant adverse impact on utilities/service systems if it would do any of the following:

- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs
- Comply with federal, state, and local statutes and regulations related to solid waste

■ Effects Not Found to Be Significant

Threshold	Would the proposed project comply with federal, state, and local statutes and regulations related to solid waste?
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The City is required by state law to recycle at least 50 percent of all trash generated. Huntington Beach recycled over 71 percent of its residential waste stream in 2006, which represents the most recent data available that has been approved by the CIWMB.¹³³ Both residential and commercial refuse is sorted for recyclables. Additionally, construction and demolition projects generate a high volume of recyclable material that is recycled to the greatest extent feasible. The proposed project would be in compliance with federal, state, and local statutes and regulation regulated to solid waste and would result in *no impact*.

¹³² California Integrated Waste Management Board, *Estimated Solid Waste Generation Rates*, <http://www.ciwmb.ca.gov/wastechar/wastegenrates/> (accessed November 22, 2010).

¹³³ California Integrated Waste Management Board, *Jurisdiction Profile for Huntington Beach (Diversion Rate)*, <http://www.calrecycle.ca.gov/Profiles/Juris/JurProfile1.asp?RG=C&JURID=205&JUR=Huntington+Beach> (accessed November 22, 2010).

■ Impacts and Mitigation Measures

Threshold	Would the proposed project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?
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Impact 4.14-6 **Implementation of the proposed project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. The proposed project would result in a *less than significant* impact.**

To determine the amount of solid waste generated by the proposed project, solid waste generation factors identified by the CIWMB are applied to the square footage of the proposed project, as presented in Table 4.14-13 (Waste Generated from the Proposed Project). To determine solid waste impacts associated with the proposed project, estimated future solid waste generation amounts are compared to the total anticipated remaining capacity at landfills that serve the City. As shown in Table 4.14-13, the proposed project is estimated to produce approximately 642 pounds per day (lbs/day), or approximately 234,330 lbs/year, of solid waste. This translates to a generation rate of approximately 0.32 tons of solid waste per day and 117 tons of solid waste per year.

Table 4.14-13 Waste Generated from the Proposed Project

Land Use	Solid Waste Generation Rates (lbs/unit/day)	Proposed Project	
		Units	Waste Generated (lbs/day)
Residential	4 lbs/dwelling unit/day	105 units	420 lbs/day
Retail Uses	0.006 lbs/sf/day	7,000 sf	42 lbs/day
Market Uses	0.006 lbs/sf/day	30,000 sf	180 lbs/day
Total			642 lbs/day (0.32 tons/day) 234,330 lbs/yr (117 tons/yr)

SOURCE: California Integrated Waste Management Board, Estimated Solid Waste Generation Rates, <http://www.ciwmb.ca.gov/wastechar/wastegenrates/> (accessed November 22, 2010).

Rainbow Disposal's Transfer Station has a design capacity of 2,800 tons per day, and current utilization ranges between 53 and 71 percent. For purposes of this analysis, and assuming a worst-case scenario of 71 percent utilization, the daily solid waste contribution to this transfer station under the proposed project would be less than 0.1 percent at approximately 0.00023 percent of its entire design capacity. Utilization of the transfer station would remain at 71 percent under the implementation of the proposed project. Rainbow Disposal is able to accept all commercial waste in addition to all construction waste generated by the proposed project. In addition, the two MRFs sort and separate all waste and recycle all appropriate materials further reducing the waste generation going to the landfills.

As shown in Table 4.14-12, there are three landfills that could serve the project site, which have a design capacity of 4,000, 8,000, and 8,500 tons per day, respectively. Based on landfill capacity, the solid waste contribution of 0.32 tons per day to any of the three landfills that serve the project site is less than 1 percent of their allowed daily capacity.

With Rainbow Disposal able to accept all commercial and construction waste from the project site and with sufficient current and future landfill capacity, the solid waste impacts resulting from implementation of the proposed project is considered ***less than significant***. No mitigation is required.

4.14.14 Cumulative Impacts

Threshold	Would the proposed project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?
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IWMD has the ability to take up to 20,000 tons of solid waste a day into its three landfills. With the implementation of the AB 939 provisions, which mandates the reduction of solid waste disposal in landfills, the amount of solid waste disposed of in landfills by build-out is required to be 50 percent lower than actual waste production. The IWMD has stated that it has sufficient landfill capacity to accommodate future disposal needs of the County until 2035 based on its projections, which include expansion within the County. Future development under the proposed project would generate 0.32 tons of solid waste per day. Solid waste generation from the proposed project represents less than 1 percent of the allowed daily capacity of any one of the three landfills serving the project site. Therefore, the proposed project would not create demands for solid waste services that exceed the capabilities of the County's waste management system. Consequently, cumulative impacts associated with solid waste within the County would be considered ***less than significant***.

4.14.15 References

- California Integrated Waste Management Board. Active Landfill Profile for Frank R. Bowerman Landfill. <http://www.calrecycle.ca.gov/profiles/Facility/Landfill/LFProfile1.asp?COID=30&FACID=30-AB-0360> (accessed November 22, 2010).
- . Active Landfill Profile for Olinda Alpha Sanitary Landfill. <http://www.calrecycle.ca.gov/profiles/Facility/Landfill/LFProfile1.asp?COID=30&FACID=30-AB-0035> (accessed November 22, 2010).
- . Active Landfill Profile for Prima Deshecha Sanitary Landfill. <http://www.calrecycle.ca.gov/profiles/Facility/Landfill/LFProfile1.asp?COID=30&FACID=30-AB-0019> (accessed November 22, 2010).
- . Estimated Solid Waste Generation Rates. <http://www.ciwmb.ca.gov/wastechar/wastegenrates/> (accessed November 22, 2010).
- . Jurisdiction Profile for Huntington Beach (Diversion Rate). <http://www.calrecycle.ca.gov/Profiles/Juris/JurProfile1.asp?RG=C&JURID=205&JUR=Huntington+Beach> (accessed November 22, 2010).
- Huntington Beach, City of. *Beach and Edinger Corridors Specific Plan Environmental Impact Report*. Section 4.14 (Utilities/Services Systems), August 2009.
- Integrated Waste Management Department. Regional Landfill Options for Orange County, Strategic Plan Update 2007. <http://www.ocgov.com/vgnfiles/ocgov/OC%20Waste/Docs/RELOOC%20Stretegic%20Plan%20Update%202007.pdf> (accessed November 22, 2010).
- Orange County Waste and Recycling. Orange County Landfill System. <http://www.ocgov.com/portal/site/ocgov/menuitem.02b739dec30413a69add603d100000f7/?vgnextoid=b9c856424c63a110VgnV>

CM1000005b00610aRCRD&vgnnextchannel=b6d41414b02f8110VgnVCM1000005b00610aRCRD&vgnnextfmt=default (accessed September 21, 2010).

RELOOC Team. *Regional Landfill Options for Orange County (RELOOC) Specific Plan*, December 2001.

Energy

This section describes the current status of energy (electricity and natural gas) services in the City of Huntington Beach, including a discussion of the ability of the City's energy services to meet the current needs of the City.

Data for this section were obtained from communication with service providers and online resources. Full reference-list entries for all cited materials are provided in Section 4.14.20 (References).

4.14.16 Environmental Setting

Energy resources consist of electricity and natural gas. Electricity is provided to the City by Southern California Edison (SCE), while the Southern California Gas Company (SCGC) provides natural gas services. Existing gas lines and power lines, both are anticipated to be sufficient to serve the proposed development.

■ Electricity

The 2009 Integrated Energy Policy Report prepared by the California Energy Commission (CEC) summarizes the state of California's electrical and natural gas supplies. Despite improvements in power plant licensing, enormously successful energy efficiency programs and continued technological advances, development of new energy supplies is not keeping pace with the state's increasing demands. A key constraint in energy is the state's electricity transmission system. Under most circumstances, the state's power grid is able to reliably deliver energy to consumers; and for the majority of the days during the year adequate energy supplies are reliably provided to consumers. California's electricity demand is driven by short summer peaks, such that reducing peak demand is the essential factor in adequately planning for the State's electrical needs. These peak demands include a few hours to several days each year, such that managing demand, rather than developing supplies at new power plants for this limited time appears the most efficient method to meet state needs on peak days. The CEC has developed an action plan which includes increasing energy capacity in investor-owned utilities, incentives for combined heat and power projects (cogeneration), energy efficiency programs, expansion of renewable energy programs.

SCE derives its electricity from a variety of sources and nearly half of its electricity comes from natural gas, with renewable resources constituting another nearly 10.6 percent.¹³⁴ SCE has undertaken a major infrastructure expansion and replacement project system throughout its 50,000-square-mile service area. The company has proposed investing approximately \$20 billion during coming years to expand and renew the region's essential distribution and transmission grids, making the power grid greener and

¹³⁴ California Energy Commission, *2009 Integrated Energy Policy Report* (December 2009).

smarter. These projects will help ensure adequate power flow and voltage for 13 million people while benefiting electricity customers in all eleven states of the western power grid.¹³⁵

■ Natural Gas

Natural gas is a “fossil fuel,” indicating that it comes from the ground, similar to other hydrocarbons such as coal or oil. SCGC purchases natural gas from several bordering states. Most of the major natural gas transmission pipelines within the City of Huntington Beach are owned and operated by SCGC. The Public Utilities Commission (PUC) regulates SCGC, who is the default provider required by State law, for natural gas delivery to the City of Huntington Beach. SCGC has the capacity and resources to deliver gas except in certain situations that are noted in State law. As development occurs, SCGC will continue to extend its service to accommodate development and supply the necessary gas lines. SCGC makes periodic upgrades to provide service for particular projects and new development. SCGC is continuously expanding its network of gas pipelines to meet the needs of new commercial and residential developments in Southern California. California has not experienced a widespread natural gas shortage in many years. Current supplies are adequate to meet demands, although natural gas storage could be expanded to improve reliability. The State imports 87 percent of its statewide natural gas supply.

4.14.17 Regulatory Framework

Refer to Section 4.14.11 (Regulatory Framework) of the BECSP Program EIR, for applicable federal, state, and local regulations that would apply to the proposed project. No new regulations have been implemented since the certification of the Program EIR.

The BECSP Development Code, which includes development standards, development regulations, and guidelines, governs all development actions with the BECSP area, including the proposed project site. The proposed project would be subject to development standards specific to the proposed project site’s BECSP designations of Town Center Neighborhood, included as BECSP Section 2.1.4 (Town Center Neighborhood).

■ General Plan and BECSP Consistency Analysis

As discussed below, an adequate supply of electricity and natural gas is anticipated to be available to serve the proposed project. Further, the proposed project would comply with the provisions of Title 24 of the CCR. As such, either option of the proposed project would be designed to conserve energy. Therefore, the proposed project would not conflict with the applicable goals, and policies of the City’s General Plan Utilities Element.

¹³⁵ Southern California Edison, Transmission Projects, <http://www.sce.com/PowerandEnvironment/Transmission/> (accessed August 12, 2010).

4.14.18 Project Impacts and Mitigation

■ Analytic Method

To determine whether implementation of the proposed project would result in impacts on electricity and natural gas supplies, the projected increase in energy demand for each utility was analyzed and calculated using a per-square-foot or per-unit consumption rate. Table 4.14-14 (Projected Electricity Demand) and Table 4.14-15 (Projected Natural Gas Demand), below, provide electricity and natural gas demand associated with the proposed project. Because demand rates are based on the type and amount of each land use, this analysis focuses upon multi-family residential, retail and market components included in the proposed project.

■ Thresholds of Significance

For purposes of this EIR, implementation of the proposed project may have a significant adverse impact on utilities/service systems if it would do any of the following:

- Require or result in the construction of new energy production or transmission facilities, or expansion of existing facilities, the construction of which could cause a significant environmental impact

■ Effects Not Found to Be Significant

No Effects Not Found to Be Significant have been identified with respect to energy.

■ Impacts and Mitigation Measures

Threshold	Would the proposed project require or result in the construction of new energy production or transmission facilities, or expansion of existing facilities, the construction of which could cause a significant environmental impact?
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Impact 4.14-7 **Implementation of the proposed project would not require or result in the construction of new energy production or transmission facilities, or expansion of existing facilities, the construction of which could cause a significant environmental impact. This would be a *less than significant* impact.**

Electricity

Implementation of the proposed project would result in a maximum of 105 dwelling units, 7,000 sf of retail uses and 30,000 sf of market uses. As such, implementation of the proposed project would increase the use of electricity at the project site to light, heat, and air condition the new building and parking areas. Based on Table 4.14-14 (Projected Electricity Demand), the total annual electricity consumption by the proposed project is estimated to be approximately 1,092,132.50 kWh/year.

Table 4.14-14 Projected Electricity Demand

<i>Type of use</i>	<i>Energy Consumption Rates</i>	<i>Proposed Development</i>	<i>Electricity (kWh/year)</i>
Residential	5,626.50 kWh/units/year	105 units	590,782.50 kWh/year
Retail Uses	13.55 kWh/sf/year	7,000 sf	94,850 kWh/year
Market Uses	13.55 kWh/sf/year	30,000 sf	406,500 kWh/year
Total	—	—	1,092,132.50 kWh/year

SOURCE: South Coast Air Quality Management District, CEQA Air Quality Handbook (1993), Natural Gas and Electricity Consumption Rates.

The state is currently experiencing constraints related to energy delivery. These constraints are generally limited to peak demand days during the summer months, such that for the majority of the days during the year adequate energy supplies are reliably provided to consumers. Implementation of the proposed project would increase use of electricity in the project area, in particular, the demand for electricity to light, heat, and air condition for residential and commercial uses. On peak days, the incremental demand from the proposed project would contribute to electricity supply and delivery constraints. The proposed project would be required to comply with the energy conservation measures contained in Title 24, which would reduce the amount of energy needed for the operation of any buildings constructed as a part of the proposed project.

SCE has undertaken a major infrastructure expansion and replacement project system throughout its 50,000-square-mile service area. The company has proposed investing approximately \$20 billion during coming years to expand and renew the region's essential distribution and transmission grids, making the power grid greener and smarter. These projects will help ensure adequate power flow and voltage for 13 million people while benefiting electricity customers in all eleven states of the western power grid.¹³⁶

An adequate supply of electricity is anticipated to be available to serve the proposed project.¹³⁷ Further, the proposed project would comply with the provisions of Title 24 of the CCR. As such, future development of the proposed project would be designed to conserve energy. Also, because SCE is currently in the process of upgrading its transmission systems, it is anticipated that the electricity demand generated by future development could be supplied without the need for additional construction or expansion of energy facilities beyond that which was previously planned.

Natural Gas

As shown in Table 4.14-15 (Projected Natural Gas Demand), the demand for natural gas from the proposed project would be approximately 6,342,090 ft³/year. Future development of the proposed project would be served by existing gas lines located in various locations within the vicinity of the project site.

¹³⁶ Southern California Edison, Transmission Projects, <http://www.sce.com/PowerandEnvironment/Transmission/> (accessed August 12, 2010).

¹³⁷ City of Huntington Beach, *Beach and Edinger Corridors Specific Plan Environmental Impact*, (August 2009), Section 4.14 (Utilities/Service Systems), p. 4.14-48.

Table 4.14-15 Projected Natural Gas Demand

Type of use	Energy Consumption Rates	Proposed Development	Natural Gas (ft ³ /year)
Residential	48,138 ft ³ /unit/year	105 units	5,054,490 ft ³ /year
Retail Uses	34.8 ft ³ /sf/year	7,000 sf	243,600 ft ³ /year
Market Uses	34.8 ft ³ /sf/year	30,000 sf	1,044,000 kWh/year
Total	—	—	6,342,090 ft³/year

SOURCE: South Coast Air Quality Management District, *CEQA Air Quality Handbook* (1993), Natural Gas and Electricity Consumption Rates.

Because the SCGC declares itself a “reactive” utility that will provide natural gas as customers request its services, the SCGC has indicated that an adequate supply of natural gas is currently available to serve the proposed project and that the level of service provided to the surrounding area would not be impaired by future development. New natural gas lines to serve future development at the project site would be located underground and would be constructed in accordance with the SCGC’s policies and extension rules on file with the CPUC at the time contractual agreements are made. Because the natural gas demand projected for future development would not exceed available or planned supply, and new infrastructure would not be required to serve the project site, the proposed project would not require or result in the construction of new energy production or transmission facilities, or expansion of existing facilities, the construction of which could cause a significant environmental impact. Therefore, this impact would be *less than significant*.

4.14.19 Cumulative Impacts

Threshold	Would the proposed project require or result in the construction of new energy production or transmission facilities, or expansion of existing facilities, the construction of which could cause a significant environmental impact?
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SCE has undertaken a major infrastructure expansion and replacement project system throughout its 50,000-square-mile service area. The company has proposed investing approximately \$20 billion during coming years to expand and renew the region’s essential distribution and transmission grids, making the power grid greener and smarter. These projects will help ensure adequate power flow and voltage for 13 million people while benefiting electricity customers in all eleven states of the western power grid.¹³⁸ Because SCE is able to meet future projected demands, and an action plan has been identified to address energy issues on a broader scale, cumulative impacts would be less than significant. Project impacts would have a less than significant contribution to these impacts.

With regard to natural gas, development in the geographic area surrounding the project site would result in continued use of this resource. The area surrounding the project site is currently served by existing infrastructure that the proposed project would also use. Since the SCGC declares itself a “reactive” utility that will provide natural gas as customers request its services, the SCGC has indicated that an adequate supply of natural gas is currently available to serve the proposed project and that the level of service

¹³⁸ Southern California Edison, Transmission Projects, <http://www.sce.com/PowerandEnvironment/Transmission/> (accessed August 12, 2010).

provided to the surrounding area would not be impaired by future development. The SCGC has stated that it can supply natural gas without jeopardizing other service commitments. The cumulative impact related to the supply of natural gas and to the need for additional or expanded facilities is less than significant, and the proposed project's contribution would not be cumulatively considerable. This is considered to be a *less than significant* impact.

4.14.20 References

- California Energy Commission. *2009 Integrated Energy Policy Report*, December 2009.
- Huntington Beach, City of. Section 4.14 (Utilities/Service Systems), *Beach and Edinger Corridors Specific Plan Environmental Impact*, August 2009.
- South Coast Air Quality Management District. *CEQA Air Quality Handbook*. Natural Gas and Electricity Consumption Rates, 1993.
- Southern California Edison. Transmission Projects. <http://www.sce.com/PowerandEnvironment/Transmission/> (accessed August 12, 2010).
- . Cities and Communities within the SCE Service Territory. http://www.sce.com/NR/rdonlyres/466AED1E-CB69-4CE0-85A7-FC5783E07D01/0/2008_SCETerritory.pdf (accessed August 4, 2010).

